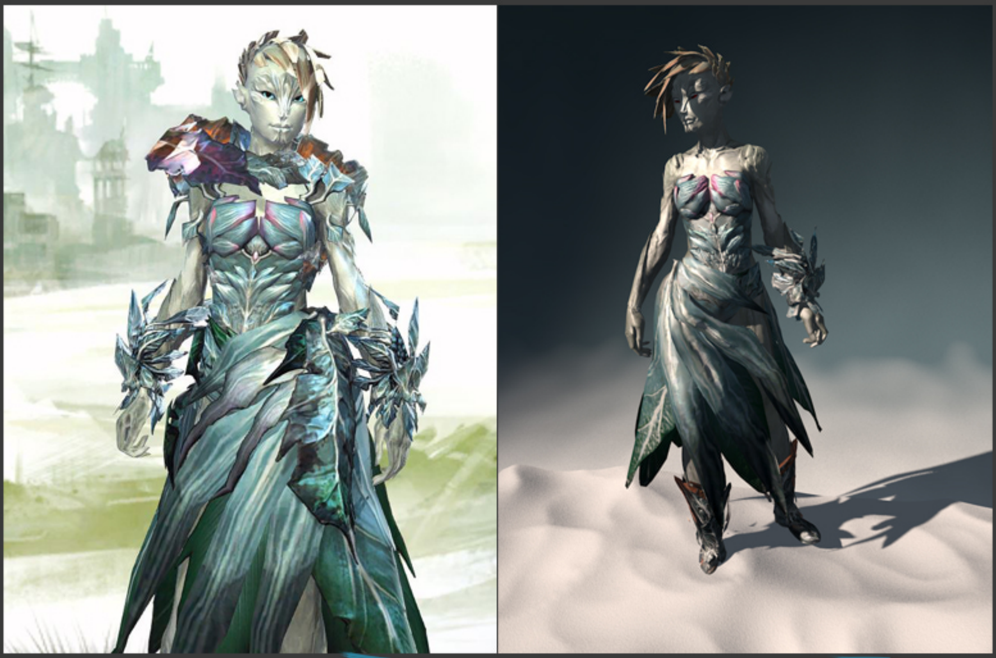
BEFORE WE BEGIN

NOTE: WHAT WE ABOUT TO DO, IS NOT SUPPORTED BY ARENA NET IN ANY FORM. SELLING OR REUSING MODELS ARE STRAIGHT COPYRIGHT VIOLATION. BUT MAKING YOUR OWN FAN ART IS PROBABLY A GREY AREA. NONE OF THE USED SOFTWARE WILL STEAL ANY PERSONAL INFORMATION, AND HIGHLY UNLIKELY TO LEAD YOUR ACCOUNT TO BE BANNED. THAT BEING SAID, USE IT AT YOUR OWN RISK.

So, can we turn this, into that?



Yes, we can! Now, that I got your attention, and you decided to give a try to your own fan art, take some time to read this short FAQ, and browse through all the pages.

This tutorial is aimed for first time 3d artist, and tries to explain every step even if it seems obvious. If you are more experienced, feel free to skip parts.

Is this the best way to do it?

Probably not, each approach have its own cons and pros, to see cons of this one, head to page 12.

Currently there are two ways to extract 3D models from gw2. first via gw2 browser. This method directly read the dat file, and extract any models after a conversion. However piecing your character together, wont be an easy task. Every element (head, hair, armor pieces) stored separately and the only way to put it together, is to extract them one by one and recombine it. Which still wont contain your personal character informations (hair color, face sliders, height, body type)

The second method utilize 3D capture softwares, one is ninja ripper, other called 3D ripper dx. We will use 3D ripper. I found it easier to handle, even tho results are far from perfect. However you can try to use them both.

Is it sylvari exclusive?

No, steps are pretty identical for every race, we even cover human skin shaders.

Can I 3D print my character?

Not without serious amount of work. Most 3D models ingame uses alpha mask and textures to create more detailed look. Which needs to be remodelled.

What about weapons?

Capturing is done on character select screen because its have the least amount of enviroment. Extracting your weapon from gw2 dat might be easier than trying to capture it. Also special effects have to be recreated from scratch.

I'm stuck, something was unclear!

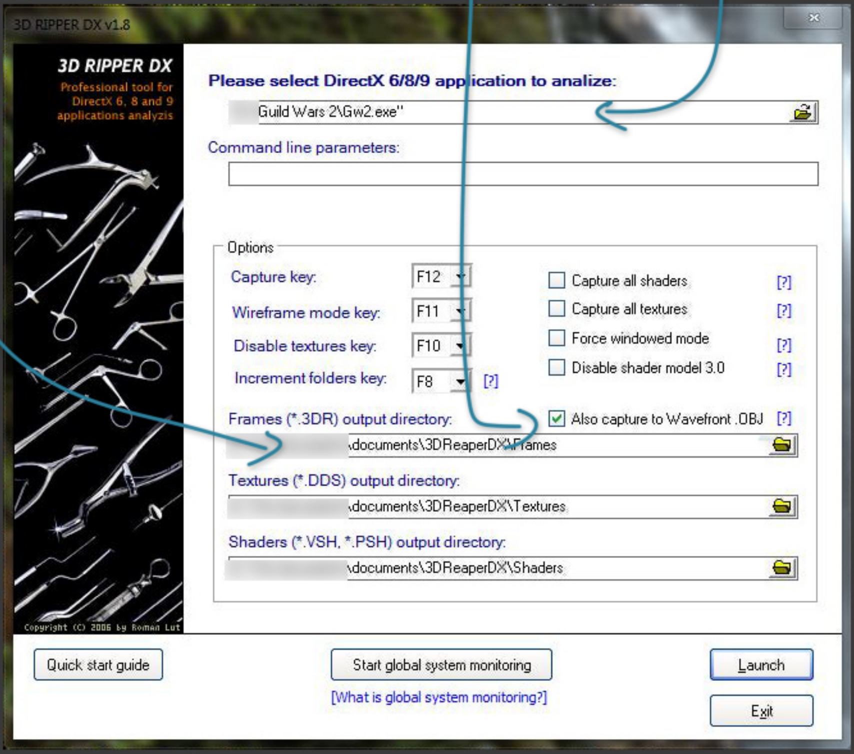
That could happen, Its my first tutorial, and I haven't got much experience writing them.
Both 3ds max and photoshop have tons of support and forums, googling your problem usually helps. Also English isn't my native language, sorry for strange grammar, and possible typos.

PAGE 2

tools: 3D ripper DX http://www.deep-shadows.com/hax/3DRipperDX.htm
Photoshop
3ds Max

Download and install (or extract using uni extractor) 3D ripper dx. That's the software we are going to use to grab the 3D model from the game. After installing, it will create 3 folders under your documents. That's where the captured data will be stored.

The only option you have to change is "Also capture OBJ" turn that on. Browse gw2.exe in analyse line. and click launch, DX ripper will disappear but...



3D RIPPER DX v1.8
3D RIPPER DX
Professional tool for DirectX 6, 8 and 9 applications analyzis
Copyright (C) 2006 by Roman Lut
Quick start guide
Start global system monitoring
[What is global system monitoring?]
Launch
Exit
[?]

Please select DirectX 6/8/9 application to analize: [redacted]Guild Wars 2\Gw2.exe"

Command line parameters:

Options

Capture key: F12

Wireframe mode key: F11

Disable textures key: F10

Increment folders key: F8

☐ Capture all shaders

☐ Capture all textures

☐ Force windowed mode

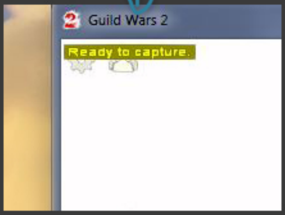
☐ Disable shader model 3.0

☑ Also capture to Wavefront .OBJ

Frames (*.3DR) output directory: [redacted]\documents\3DReaperDX\Frames

Textures (*.DDS) output directory: [redacted]\documents\3DReaperDX\Textures

Shaders (*.VSH, *.PSH) output directory: [redacted]\documents\3DReaperDX\Shaders



Ready to capture.

...you should see this, in top left corner.
Press F12 to capture, it may take 10-30 sec. Only need to press it once, game may look frozen too.

I recommend using it on character select screen, or rooms that have as little environment as possible. The captured models are far from ideal (we have to fix them later) And nothing going to open a 500 megabyte obj.

However, if you really really want to capture your weapon, I suggest find and empty room (Divinity's reach throne room maybe?). Let dx ripper write all the data. and import the elements from OBJ file In smaller groups until you find your weapon.

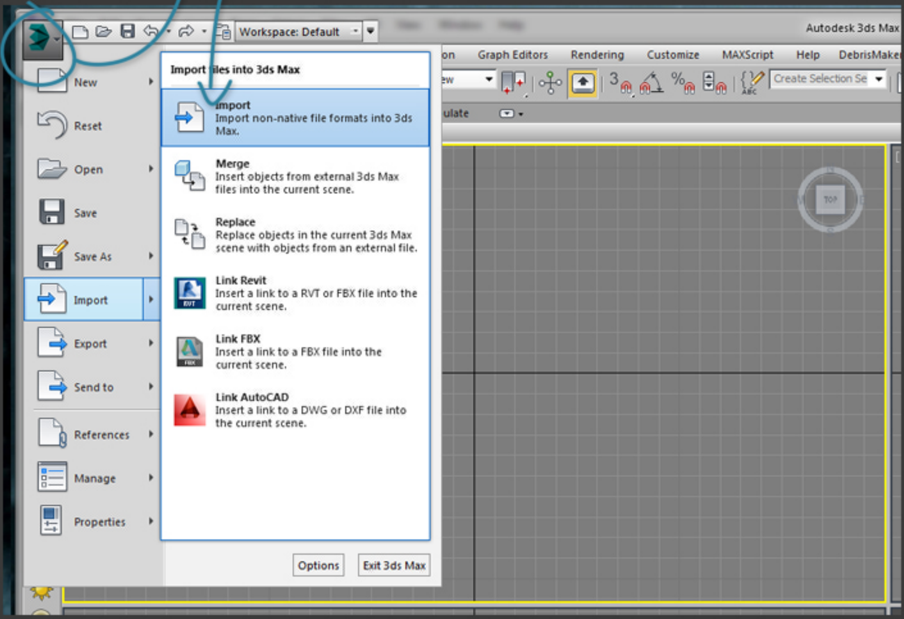
Once you done, open the captured folders, and check the files. Content should be:

FRAMES FOLDER: 3D objects, you should see 3 files named as "frame_Current date" .obj .3dr and .mtl
obj: model we going to use.
3dr: Native file of dx ripper, unfortunately the loader plugin no longer supports later 3ds max versions.
Mtl: Material data for obj file.

TEXTURE FOLDER:
dds: An army of dds files, these are the textures ripped from the game, we only need one, but have to find it first.

SHADER FOLDER:
Shader data from drirectX, its not needed, you can delete its content.

Start 3ds max, click its "start" menu, select import, browse the obj file in DX ripper folder under your documents, and import it.



Import files into 3ds Max

Import
Import non-native file formats into 3ds Max.

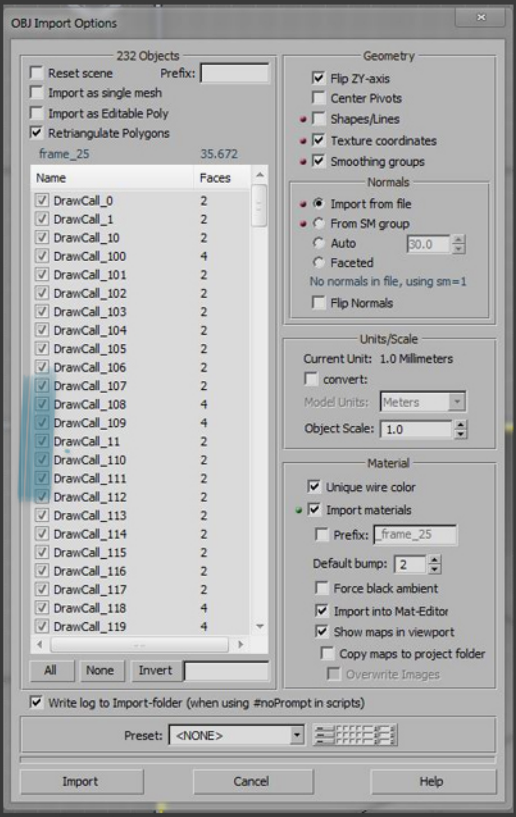
Merge
Insert objects from external 3ds Max files into the current scene.

Replace
Replace objects in the current 3ds Max scene with objects from an external file.

Link Revit
Insert a link to a RVT or FBX file into the current scene.

Link FBX
Insert a link to a FBX file into the current scene.

Link AutoCAD
Insert a link to a DWG or DXF file into the current scene.



OBJ Import Options

232 Objects
☐ Reset scene Prefix:
☐ Import as single mesh
☐ Import as Editable Poly
☑ Retriangulate Polygons
frame_25 35.672

Name	Faces
☑ DrawCall_0	2
☑ DrawCall_1	2
☑ DrawCall_10	2
☑ DrawCall_100	4
☑ DrawCall_101	2
☑ DrawCall_102	2
☑ DrawCall_103	2
☑ DrawCall_104	2
☑ DrawCall_105	2
☑ DrawCall_106	2
☑ DrawCall_107	2
☑ DrawCall_108	4
☑ DrawCall_109	4
☑ DrawCall_11	2
☑ DrawCall_110	2
☑ DrawCall_111	2
☑ DrawCall_112	2
☑ DrawCall_113	2
☑ DrawCall_114	2
☑ DrawCall_115	2
☑ DrawCall_116	2
☑ DrawCall_117	2
☑ DrawCall_118	4
☑ DrawCall_119	4

Geometry
☑ Flip ZY-axis
☐ Center Pivots
☐ Shapes/Lines
☑ Texture coordinates
☑ Smoothing groups

Normals
● Import from file
○ From SM group
○ Auto 30.0
○ Faceted
No normals in file, using sm=1
☐ Flip Normals

Units/Scale
Current Unit: 1.0 Milimeters
☐ convert:
Model Units: Meters
Object Scale: 1.0

Material
☑ Unique wire color
☑ Import materials
☐ Prefix: _frame_25
Default bump: 2
☐ Force black ambient
☑ Import into Mat-Editor
☑ Show maps in viewport
☐ Copy maps to project folder
☐ Overwrite Images

☑ Write log to Import-folder (when using #noPrompt in scripts)

Preset: <NONE>

Import options will appear. Use the setting listed here.

The drawcall_ objects are all the 3d data ripped, each UI element have its own poly.

If you ripped a larger scene and 3ds max unable to open the obj. Uncheck some of the objects and try importing them in smaller groups.

An error message will appear about missing textures. Ignore it.

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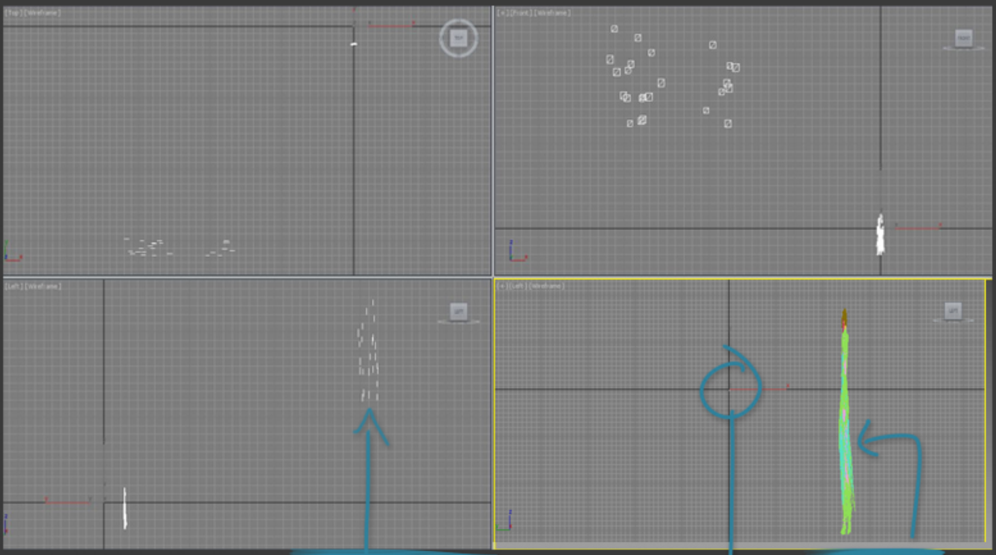
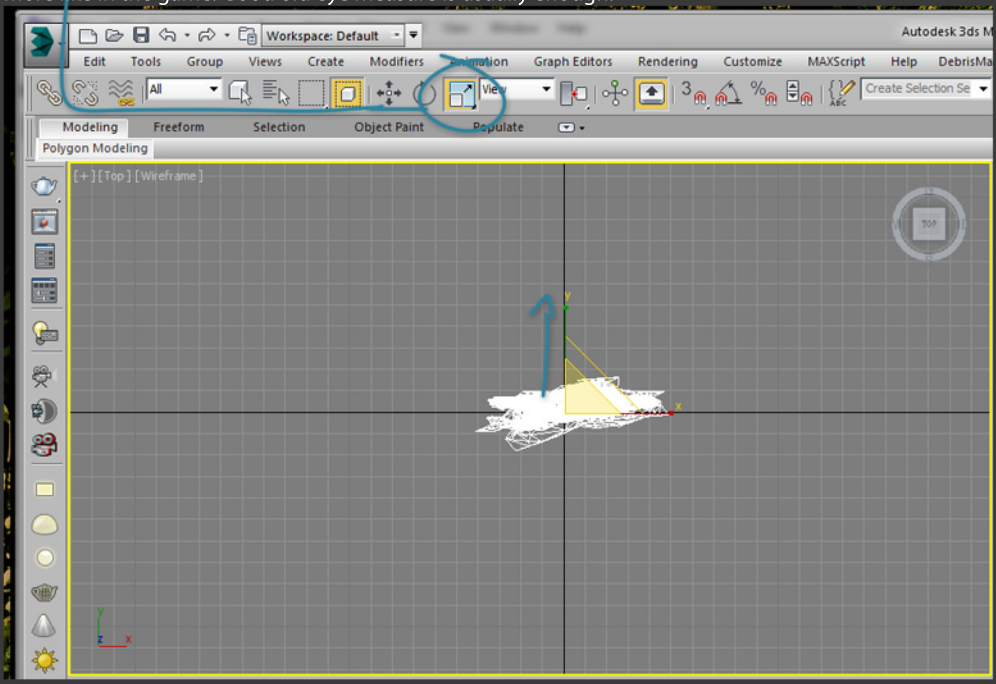
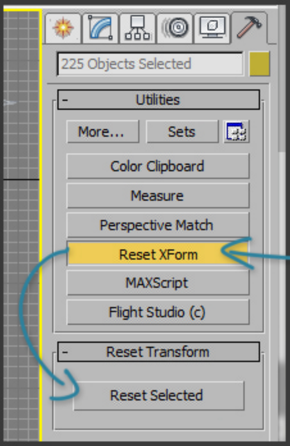


What do we have here... The floating little rectangles are the UI elements. The larger flat like objects is your character. Delete the UI objects, we don't need them. Make sure you delete very small scale flat objects in the middle as well. (somewhere there)

On a closer look you can see the scaling of the model is all wrong. Way too flat and thin. Select scale tool (press R) Make sure your whole model is selected and drag it along Y axis on TOP view.

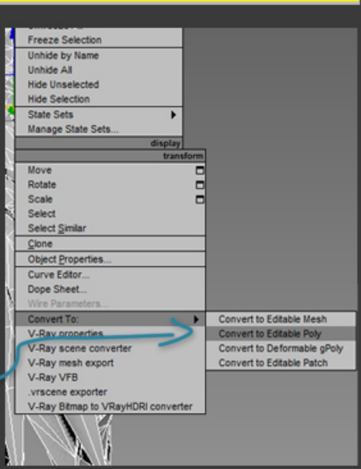
Once you're done, repeat the same along X axis on front view, and the Left view, until your model looks more like in the game. Good old eye measure is usually enough.

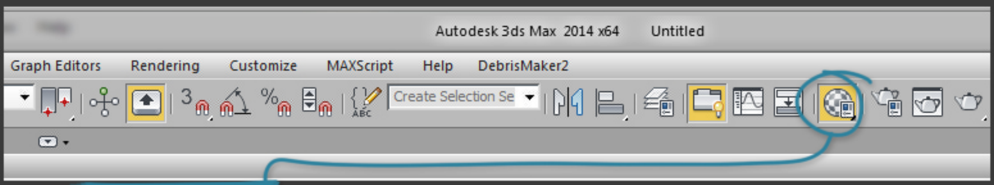




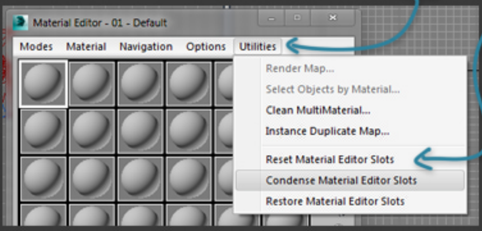
After scale looks okay, and your whole model is selected, find Utility panel on top right corner, and press "reset XForm" to reset scale value.

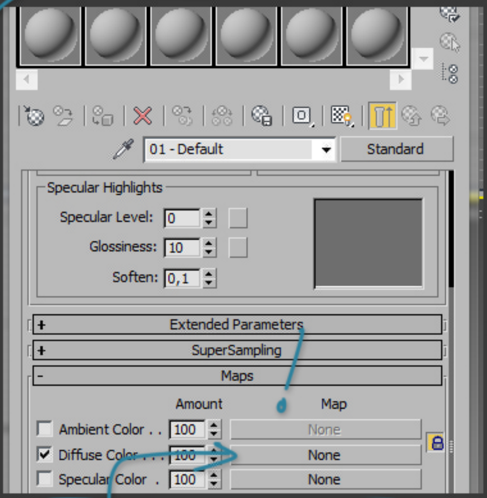
Than right click your model and press "convert to editable poly" To collapse xform modifer.





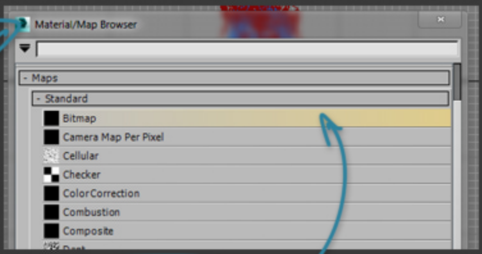
Open Simple material editor, by clicking its icon. and reset the slots, which is currently full with unused materials from the import, by selecting Utilities, and Reset Material Editor Slots


Material Editor - 01 - Default
Modes
Material
Navigation
Options
Utilities
Render Map...
Select Objects by Material...
Clean MultiMaterial...
Instance Duplicate Map...
Reset Material Editor Slots
Condense Material Editor Slots
Restore Material Editor Slots



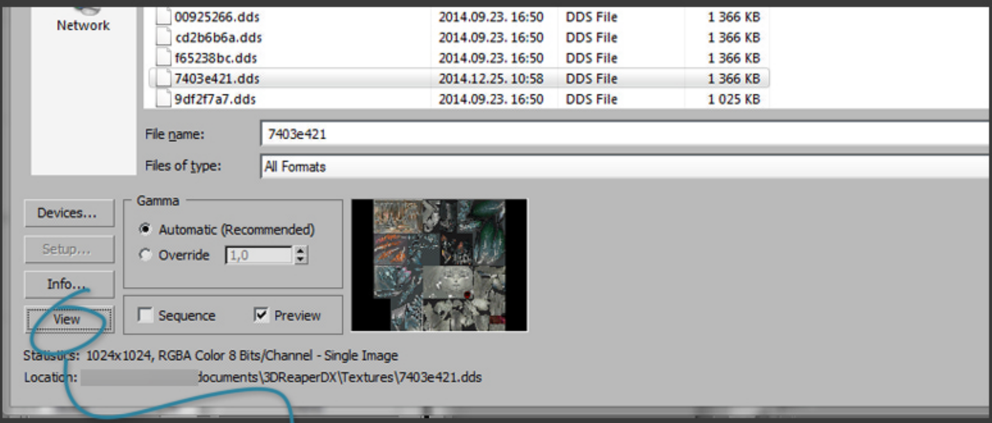
Specular Level: 0
Glossiness: 10
Soften: 0,1

	Amount	Map
☐ Ambient Color . .	100	None
☑ Diffuse Color . . .	100	None
☐ Specular Color .	100	None



Open the maps roll-out panel, find Diffuse color, and click "none" box next to it. On the new Material/ map Browser, select Bitmap, find your DX ripper output folder: textures.

You should see lot of DDS files. I suggest order them by file size so you find your character's texture easier. That's the only one we need from here.



00925266.dds	2014.09.23. 16:50	DDS File	1 366 KB
cd2b6b6a.dds	2014.09.23. 16:50	DDS File	1 366 KB
f65238bc.dds	2014.09.23. 16:50	DDS File	1 366 KB
7403e421.dds	2014.12.25. 10:58	DDS File	1 366 KB
9df2f7a7.dds	2014.09.23. 16:50	DDS File	1 025 KB

File name: 7403e421

Files of type: All Formats

● Automatic (Recommended)

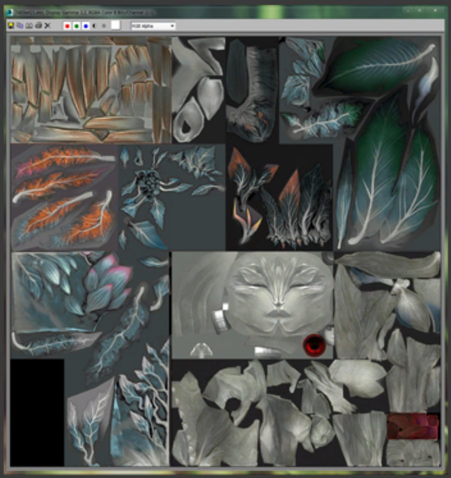
○ Override 1,0

☐ Sequence ☑ Preview

Statistics: 1024x1024, RGBA Color 8 Bits/Channel - Single Image

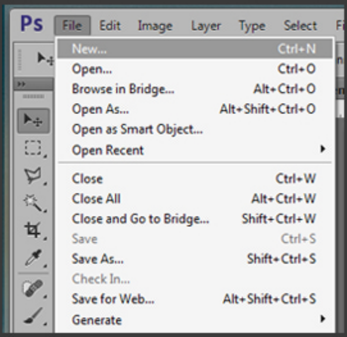
Location: [redacted]documents\3DReaperDX\Textures\7403e421.dds

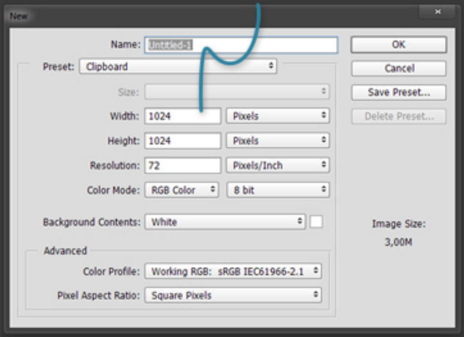
Now we need this image in Photoshop, problem is, PS cant open DDS by default. So, use 3ds max's viewer to copy the texture. Click the view button, and new window will appear with the texture



This is more or less, how a character texture looks like. It will be 1024x1024, and packed thigh, Luckily dx ripper also exports the unwrap data.

We are going to copy the texture to photoshop. Start PS and make a new 1024x1024 image.

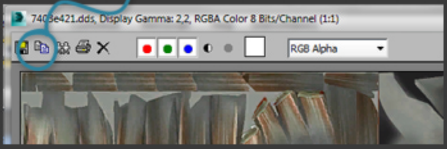




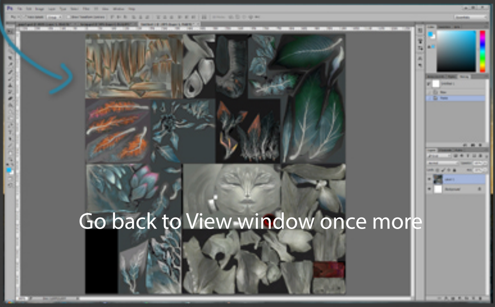
Name: Untitled-1
Preset: Clipboard
Size:
Width: 1024 Pixels
Height: 1024 Pixels
Resolution: 72 Pixels/Inch
Color Mode: RGB Color 8 bit
Background Contents: White
Advanced
Color Profile: Working RGB: sRGB IEC61966-2.1
Pixel Aspect Ratio: Square Pixels
Image Size: 3,00M

In the next steps we will copy both RGB and ALPHA channel of the texture.

So head back to 3ds max's view panel, and click the copy icon

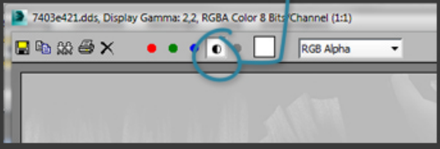

7403e421.dds, Display Gamma: 2.2, RGBA Color 8 Bits/Channel (1:1)
RGB Alpha

Paste your image into photoshop by using Control+V (Or edit -> paste) Now back to...

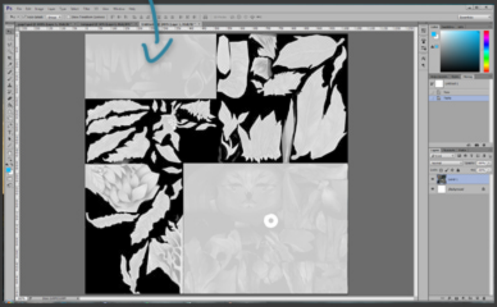


Go back to View window once more

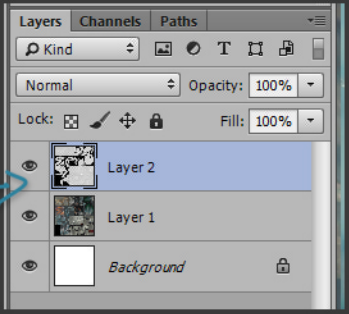
...view panel again, click Alpha icon, then click copy again (image should turn black and white)


7403e421.dds, Display Gamma: 2.2, RGBA Color 8 Bits/Channel (1:1)
RGB Alpha

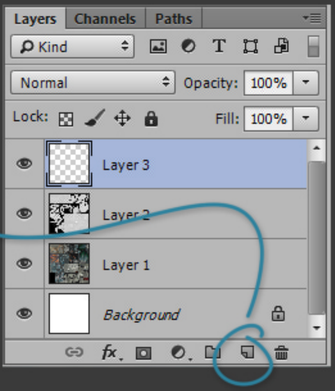
Paste the new image on the same picture, You should see 2 layers on each-other now.

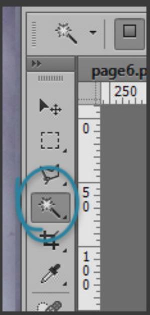


Now we have 2 layers, so we can start to work on textures. Save the PSD file. Also you can close the view window in 3ds max.

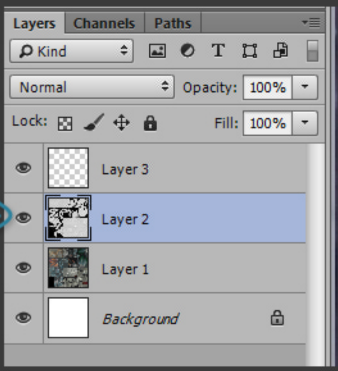


Click new layer icon at the bottom of the window. Now we have 3 layers.

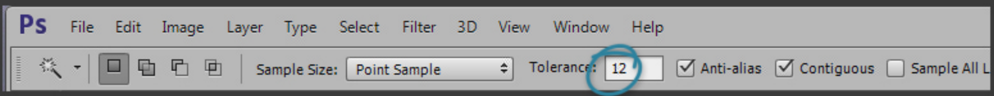




Click the magic wand tool, and make sure the alpha channel layer (middle) is selected.

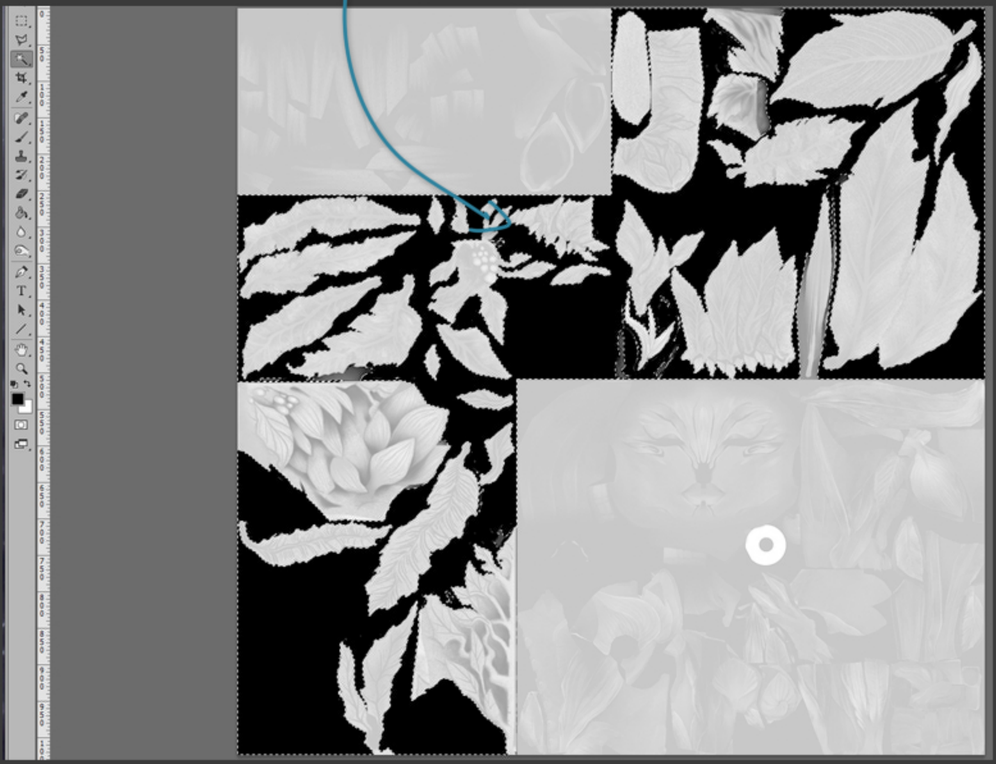


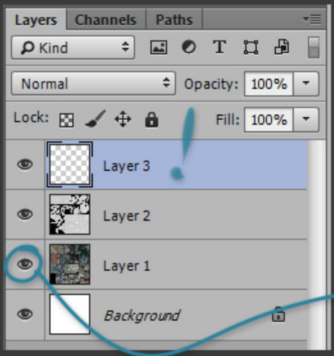
You may have to change the settings of the magic wand tool. try various values for tolerance, or turn on / off Contiguous.



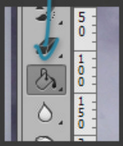
Sample Size: Point Sample
Tolerance: 12
☑ Anti-alias
☑ Contiguous
☐ Sample All L

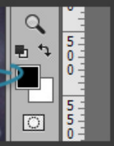
Select the black area, Your image should look something like this bellow.



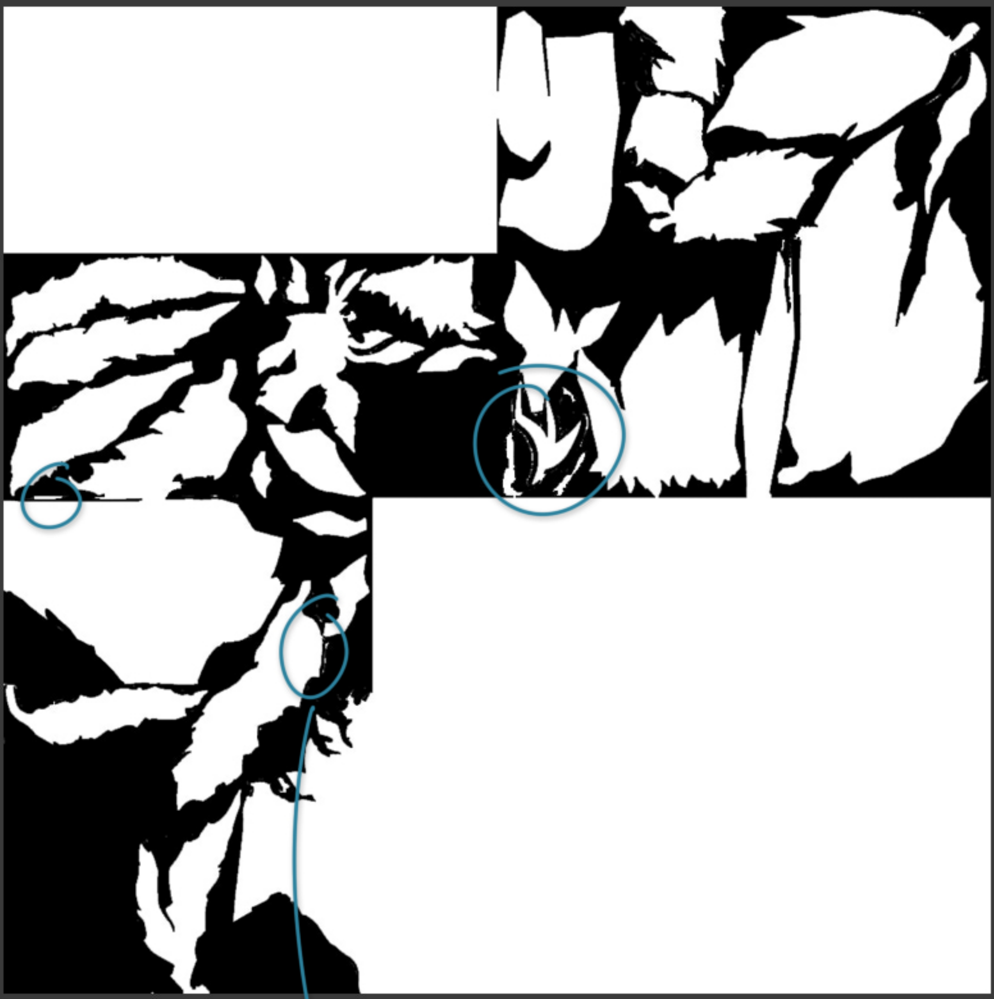


Click on the top empty layer And use the fill tool. Make sure the foreground color is black.

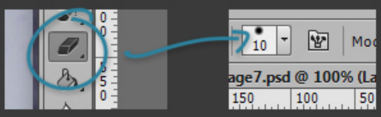


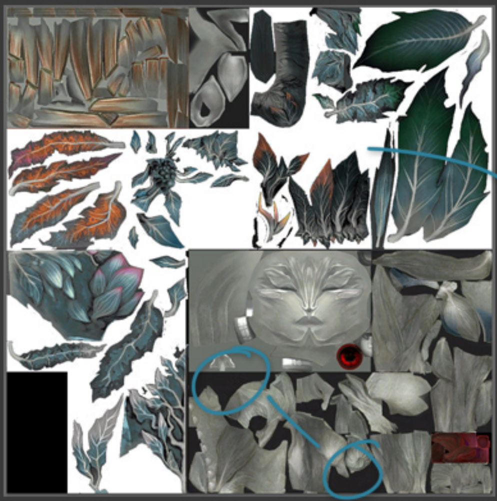


Turn off the 2 bellow layers, by clicking the eye icon. and you should see something like....

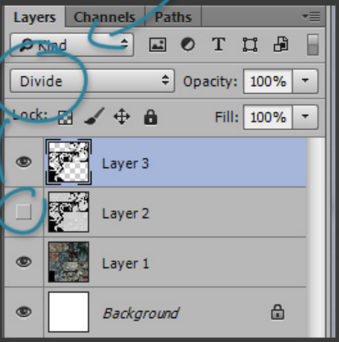


...this. Not bad, but some areas requires manual fixing. Use the Eraser tool and a small brush size to delete some unwanted pixels.





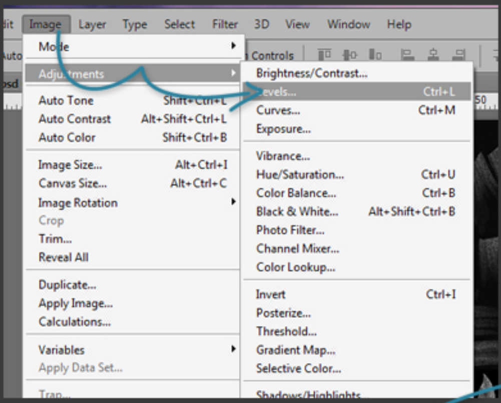
To, get a preview on the progress, set the layer style to divide. The area in white will be transparent on your model. Everything else visible. It may reveal some more errors



Divide
Opacity: 100%
Fill: 100%

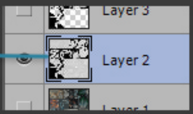
Use the magic wand tool on the rgb channel as well, to fill areas missing on alpha. Keep in mind, not everything have to have alpha channel. Skin area generally don't need any masks

Save your texture, (format does not make much difference jpg will work fine) In a place where you can find it. I suggests name it: character_name_opacity for easier handling. Make sure the picture is the above black and white version. (both layer 2 and layer 1 is hidden and divide layer style is set back to normal.) (to hide layers, click eye icon)

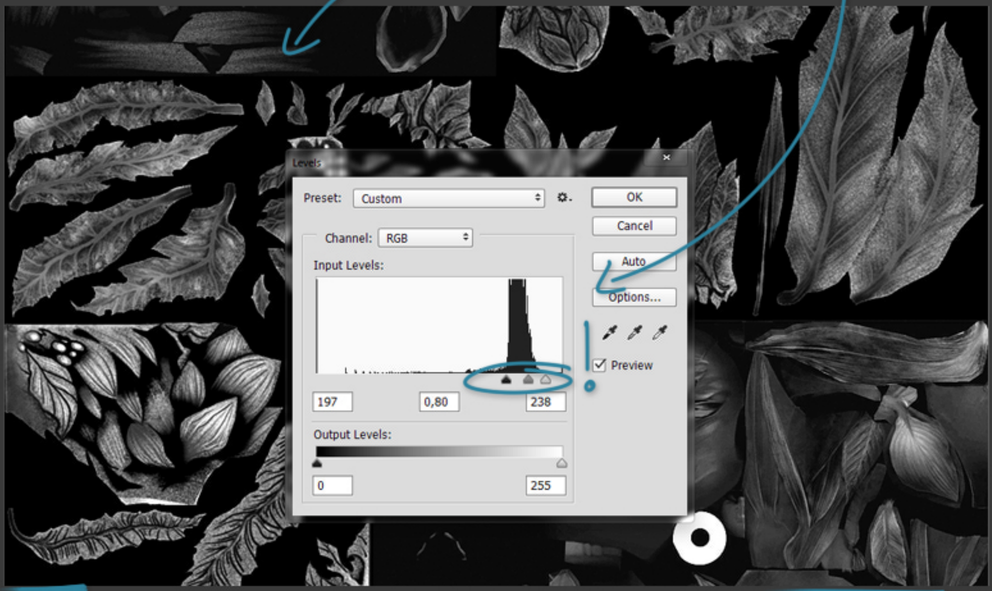


Lets work on the bump map. This map gives fine non geometric detail to your model. It appears less flat. Normal maps would be preferred, but this will do.

select the
original alpha layer
we copied earlier.

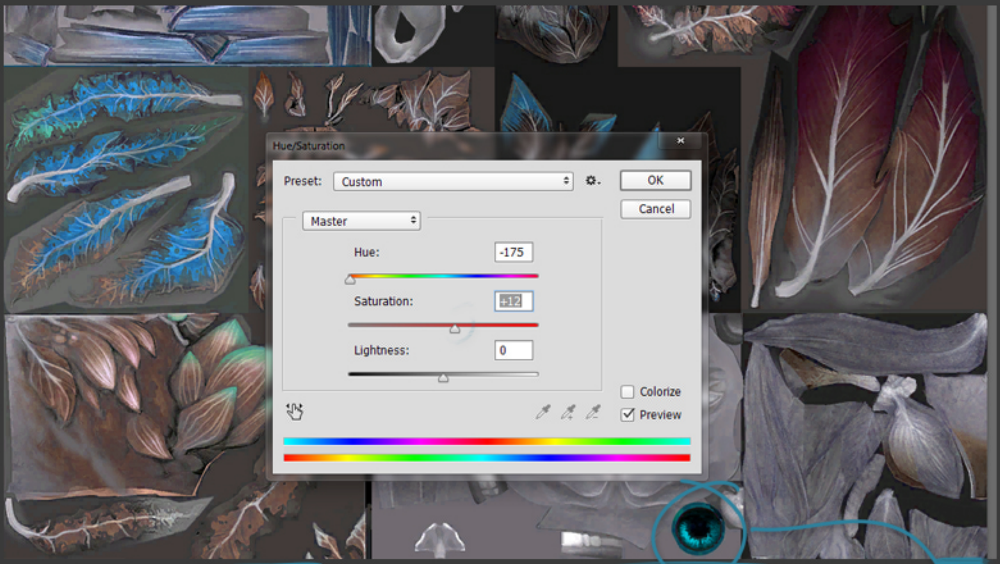


Click image, adjustment, levels.
Set the sliders something like this. The key is to make bright grey area appear black. while preserve some contrast.



Preset: Custom
Channel: RGB
Input Levels: 197 0,80 238
Output Levels: 0 255
☑ Preview

Save this image as well. Ideally same place as the previous one, and name it character_name_bump. Finally, Save the rgb channel texture and place it next to them. This step is optional, but after that. You can delete every DDS file from the dx ripper folder.



Preset: Custom
Master
Hue: -175
Saturation: +12
Lightness: 0
☐ Colorize
☑ Preview

Optionally you can use Hue tool to recolor your rgb texture, or increase saturation. Don't forget to fix the eye color. For some reason its always ripped as red.

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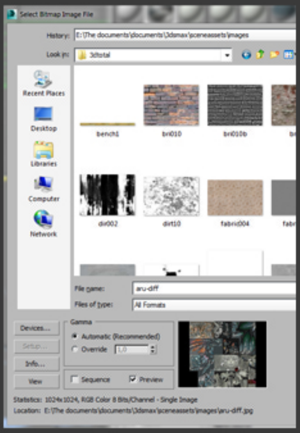
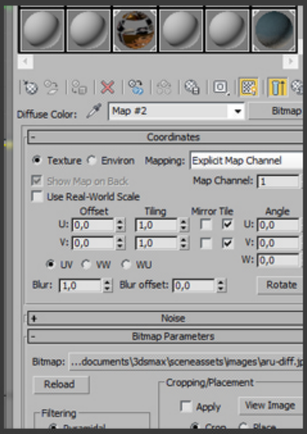
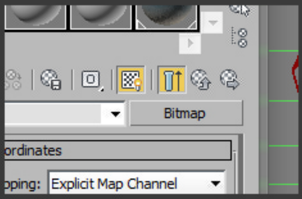

Select Bitmap Image File
History: E:\The documents\documents\3dsmax\sceneassets\images
Look in: 3dtotal
Recent Places
Desktop
Libraries
Computer
Network
bench1
bri010
bri010b
dirt002
dirt10
fabric004
File name: aru-diff
Files of type: All Formats
Gamma
Automatic (Recommended)
Override
Sequence
Preview
Devices...
Setup...
Info...
View
Statistics: 1024x1024, RGB Color 8 Bits/Channel - Single Image
Location: E:\The documents\documents\3dsmax\sceneassets\images\aru-diff.jpg

If you left 3ds max where I did. The select bitmap window should still be open.

Simply browse you RGB channel texture.

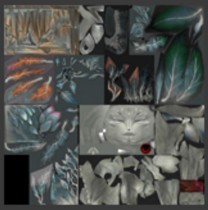


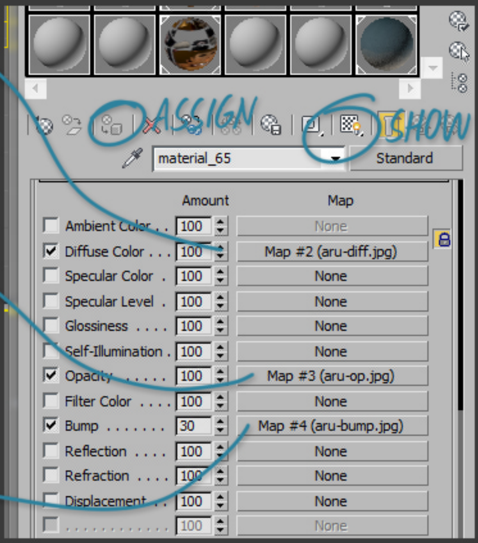
If you closed that window, click on the bitmap under parameter roll-down.



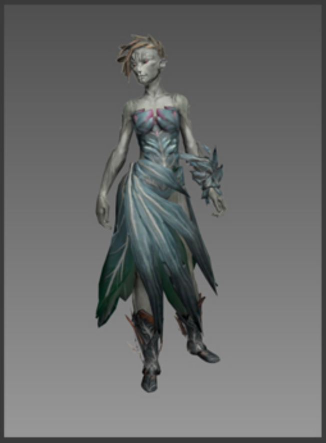
Click on "go to parent" icon to get back to the top level material. And browse all the textures in the correspondent slots.

RGB channel goes to Diffuse map, Black and white transparency map goes under opacity. And Bump map, well, under bump.





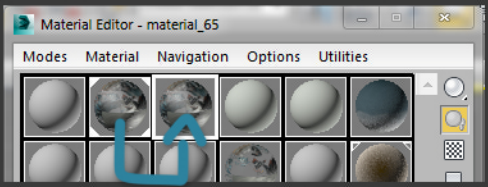
	Amount	Map
☐ Ambient Color . .	100	None
☑ Diffuse Color . . .	100	Map #2 (aru-diff.jpg)
☐ Specular Color .	100	None
☐ Specular Level .	100	None
☐ Glossiness	100	None
☐ Self-Illumination .	100	None
☑ Opacity	100	Map #3 (aru-op.jpg)
☐ Filter Color	100	None
☑ Bump	30	Map #4 (aru-bump.jpg)
☐ Reflection	100	None
☐ Refraction	100	None
☐ Displacement . .	100	None
☐	100	None



Once you're done. Select your character, by pressing Control+A (or simply use the select tool) And click Assign material in the material editor.

Finally click, show shaded material icon to display the texture on viewport. This is what you should see.

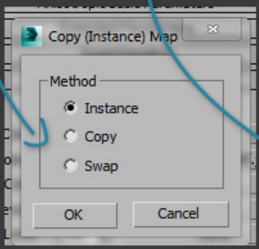
This step is optional, if you work with a human or norn that shows a bit of skin, a simple shader isn't enough. Rendering human skin is tricky business. Gw2 models are far from realistic, so we want to preserve the style but also make it more skin like.



Make a copy of the current material into a new slot. by simply dragging it over.

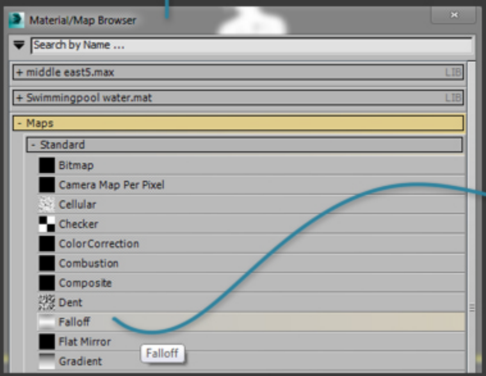
Set the shader to Anisotropic, adjust the specular, glossiness, and anisotropy settings.

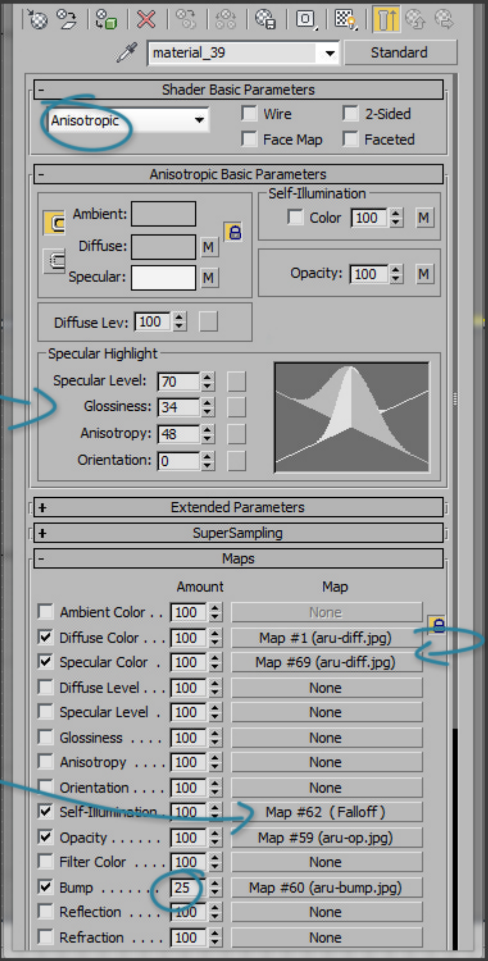
Copy diffuse color material to the specular color slot. By also dragging it down.



Method
● Instance
○ Copy
○ Swap

Click the self illumination map, and select falloff from Material/map Browser. And adjust bump map, should be around 15-30.





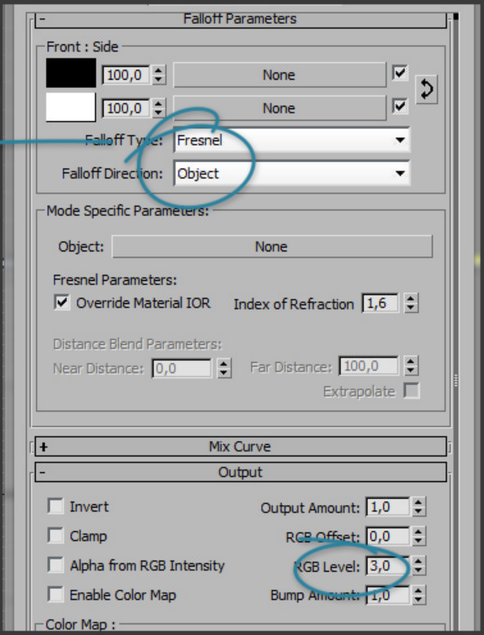
Anisotropic
☐ Wire
☐ 2-Sided
☐ Face Map
☐ Faceted

☐ Color 100
Opacity: 100
Diffuse Lev: 100

Specular Level: 70
Glossiness: 34
Anisotropy: 48
Orientation: 0

	Amount	Map
☐ Ambient Color	100	None
☑ Diffuse Color	100	Map #1 (aru-diff.jpg)
☑ Specular Color	100	Map #69 (aru-diff.jpg)
☐ Diffuse Level	100	None
☐ Specular Level	100	None
☐ Glossiness	100	None
☐ Anisotropy	100	None
☐ Orientation	100	None
☑ Self-Illumination	100	Map #62 (Falloff)
☑ Opacity	100	Map #59 (aru-op.jpg)
☐ Filter Color	100	None
☑ Bump	25	Map #60 (aru-bump.jpg)
☐ Reflection	100	None
☐ Refraction	100	None

Setup the falloff map as the following:
Falloff type: Fresnel
Falloff Direction: Object
increase the RGB level to 3 (value depends on your character's skin color from 1,5 to 6)

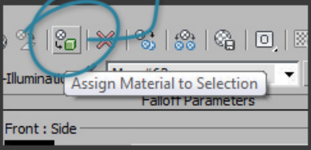


100,0 ☑
100,0 ☑
Falloff Type: Fresnel
Falloff Direction: Object
Object: None
☑ Override Material IOR
Index of Refraction 1,6
Near Distance: 0,0
Far Distance: 100,0
Extrapolate ☐

☐ Invert
☐ Clamp
☐ Alpha from RGB Intensity
☐ Enable Color Map
Output Amount: 1,0
RGB Offset: 0,0
RGB Level: 3,0
Bump Amount: 1,0

This shader also works for hair, or fur, makes it looks more shiny, and fakes a bit of sub surface scattering. However if you wish to have a better skin. I suggest to look for more advanced renderer like vary.

Finally don't forget to assign this material to your character, but only for open skin and hair objects.



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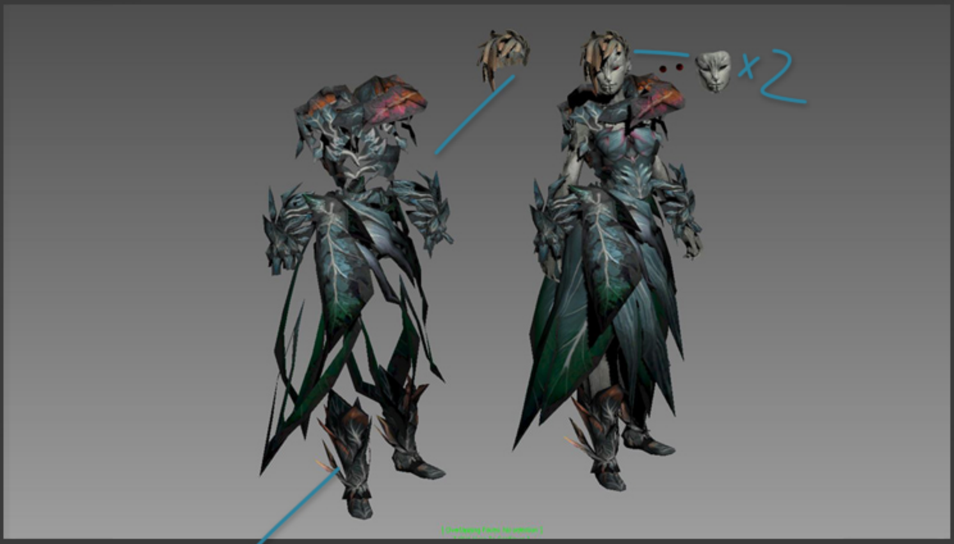
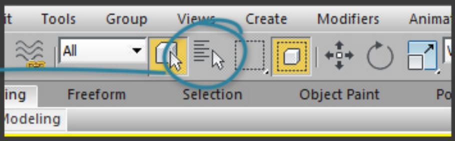
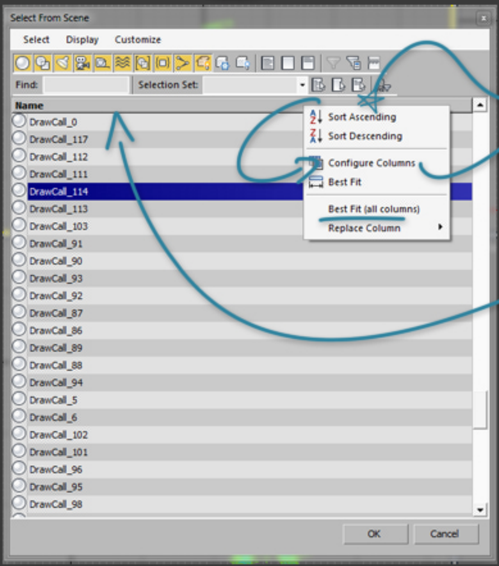
Now the model is almost ready. Time for some bug fixes. The mesh is far from ideal, but you can get a decent render without too much trouble.



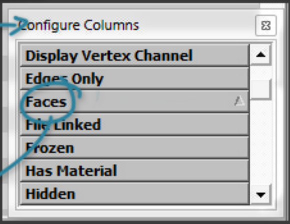
Some mesh are duplicated, to get rid of them click select by name icon





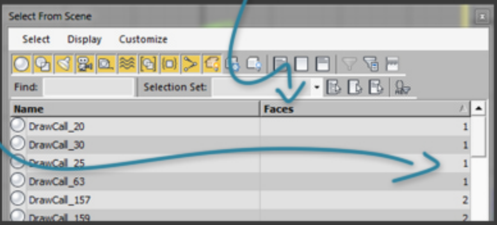
Name
DrawCall_0
DrawCall_117
DrawCall_112
DrawCall_111
DrawCall_114
DrawCall_113
DrawCall_103
DrawCall_91
DrawCall_90
DrawCall_93
DrawCall_92
DrawCall_87
DrawCall_86
DrawCall_89
DrawCall_88
DrawCall_94
DrawCall_5
DrawCall_6
DrawCall_102
DrawCall_101
DrawCall_96
DrawCall_95
DrawCall_98

In the new window, right click on column header. And select Configure Columns.



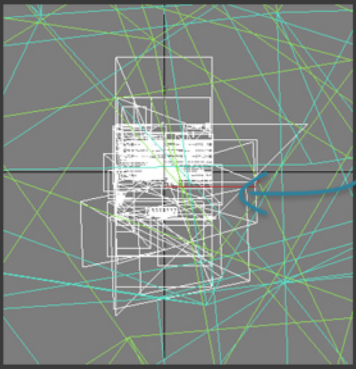
Which brings up another window. Find faces in the list (you might have to scroll down) And drag it up the column header. Finally, right click on header again, and select best fit to arrange it

Should look something like this

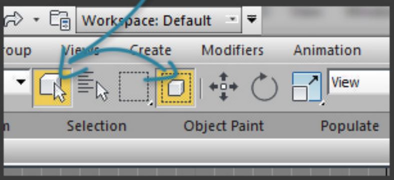


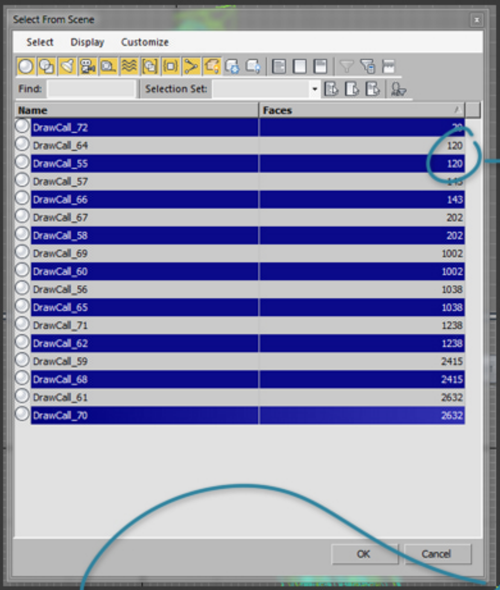
Name	Faces
DrawCall_20	1
DrawCall_30	1
DrawCall_25	1
DrawCall_63	1
DrawCall_157	2
DrawCall_159	2

If you see an army of 1 or 2 face objects, than you haven't deleted all the UI elements. There are some very small scale objects right at the center. Zoom into your model to find them.



The green lines in my case are the character model. In very near zoom at front view. The small rectangles are the rough UI elements. You can easily select them by switching the select tool to window mode. To do that, click on its icon





Name	Faces
DrawCall_72	20
DrawCall_64	120
DrawCall_55	120
DrawCall_57	143
DrawCall_66	143
DrawCall_67	202
DrawCall_58	202
DrawCall_69	1002
DrawCall_60	1002
DrawCall_56	1038
DrawCall_65	1038
DrawCall_71	1238
DrawCall_62	1238
DrawCall_59	2415
DrawCall_68	2415
DrawCall_61	2632
DrawCall_70	2632

That's about the right amount of objects. If you see significantly more, there are still some trash in the scene. Hunt them!

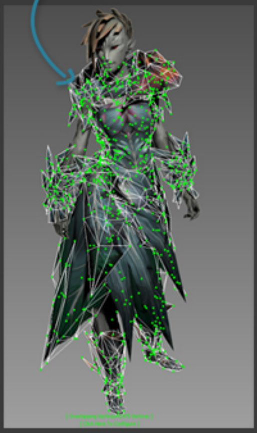
Now, notice some of the objects have same amount of faces. Those are duplicates. If you order them by face, it will be every second one. Select one of each by holding Control, click OK and press delete key.

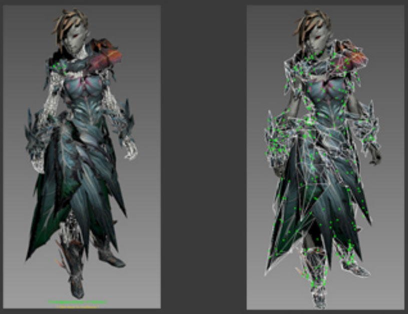
At this point your model is more or less ready for some basic render. But still need some fixing.

Click [+] in veiwport, and find xView. In the new menu click Overlapping vertices.

This will show all the vertices that are doubled. Most of the faces are rendered 2 sided, and DX ripper saved them as 2 faces. There are really no automated method to get rid of them.

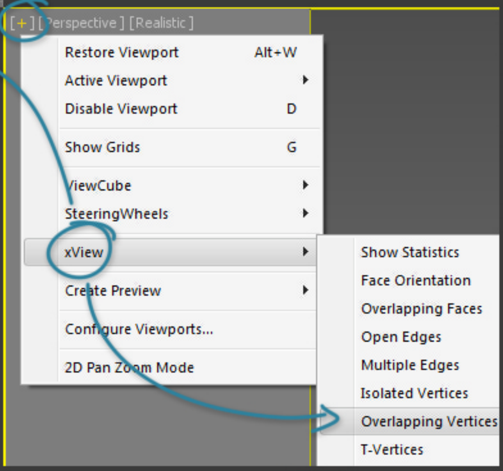
However xView will highlight their doubled vertices with green dots. Yeah, quiet a lot, don't panic.



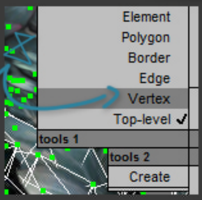


The body mesh have almost no overlaps after weld. The rest, well its not that good. There are really no better way than delete them one by one.

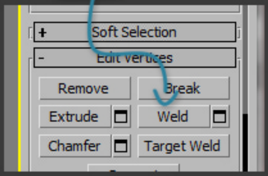
Not every duplicates are bad. Check other xView options (faces, edges) to help investigate other errors.



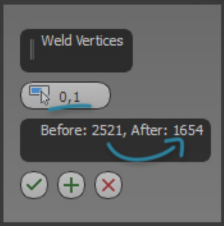
Most of the vertices can be welded together.



Right click on your model, select Vertex from context menu. Find Weld on the right panel.



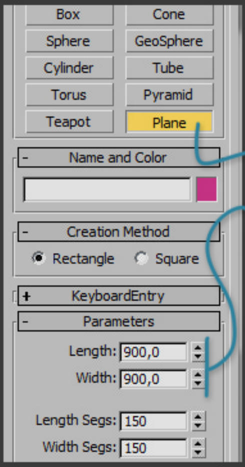
Leave the threshold at 0,1 and click OK. As you can see the number significantly reduced.



0,1

Before: 2521, After: 1654

Repeat that on every mesh



● Rectangle ○ Square

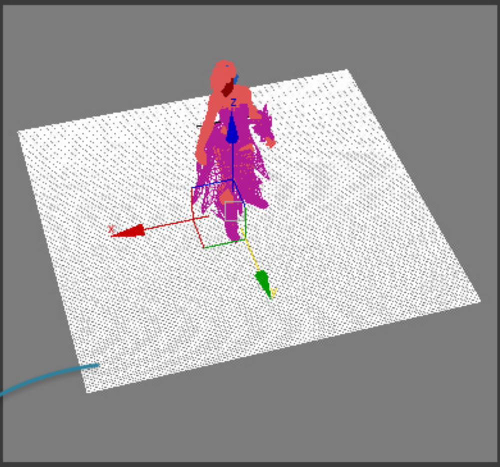
Length: 900,0
Width: 900,0
Length Segs: 150
Width Segs: 150

Now, that the character is ready.
Lets make a basic environment.

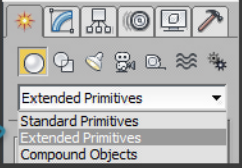
for a start, make a plane
size: 900x900*
segments: 150x150

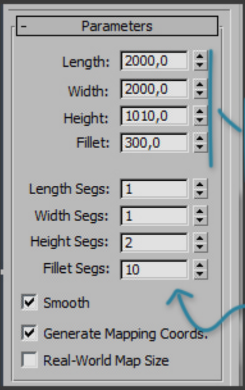
*size may change depends on your scale.

Place it somewhere under your character.



Select Extended primitives under create.



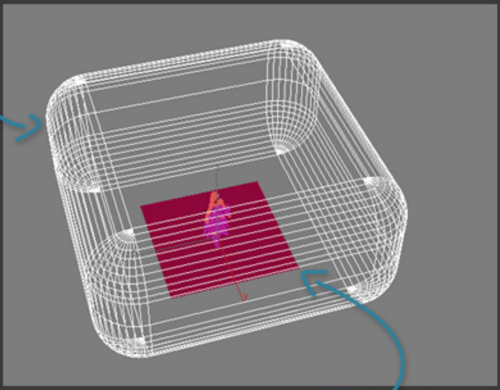


Length: 2000,0
Width: 2000,0
Height: 1010,0
Fillet: 300,0
Length Segs: 1
Width Segs: 1
Height Segs: 2
Fillet Segs: 10
☑ Smooth
☑ Generate Mapping Coords.
☐ Real-World Map Size

Make a chamfer box.
Even larger than the plane.
Length: 2000
Width: 2000
Height: 1010

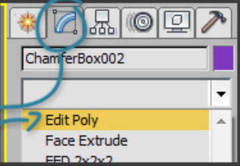
Or whatever size fits you character

fillet segments: 10



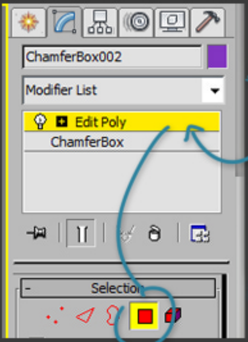
While the Chamfer box is still selected

click modifier panel, and find edit poly.



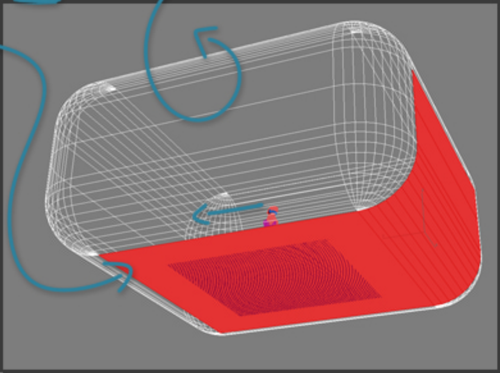
The bottom of the chamfer box is slightly bellow the plane.

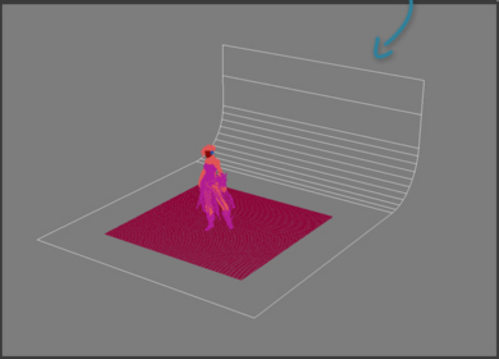
Change the perspective so you see your model from bottom, and your character faces away from you.



select the polygons under and behind your character. in edit poly mode.

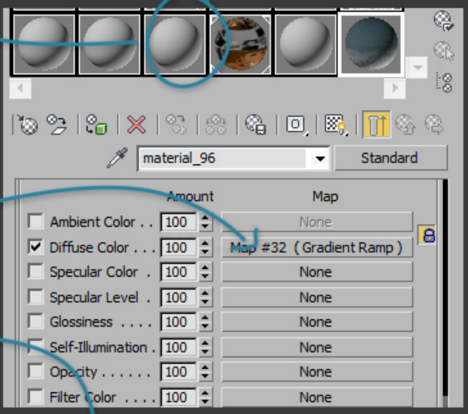
When done, press control+i to invert selection. Finally press delete, so you end up with a curve.





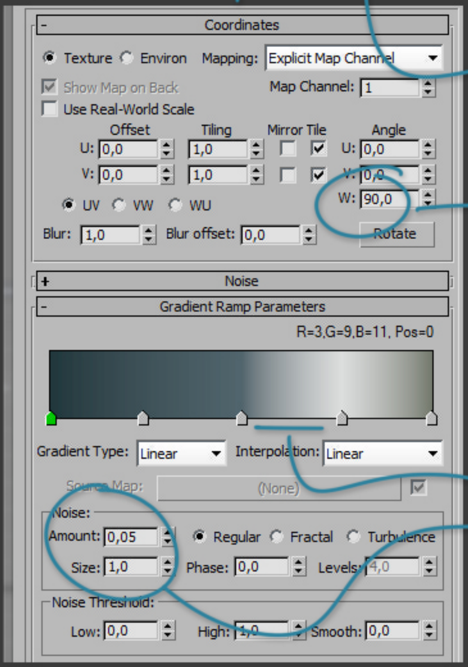
This is what you should have by now.

We are going to make some materials. Open material editor, find a new slot. Open roll-out maps, as we did earlier, click diffuse map, and select Gradient Ramp



material_96 — Standard

		Amount	Map
☐	Ambient Color	100	None
☑	Diffuse Color	100	Map #32 (Gradient Ramp)
☐	Specular Color	100	None
☐	Specular Level	100	None
☐	Glossiness	100	None
☐	Self-Illumination	100	None
☐	Opacity	100	None
☐	Filter Color	100	None



Coordinates

● Texture ○ Environ Mapping: Explicit Map Channel

☑ Show Map on Back Map Channel: 1

☐ Use Real-World Scale

	Offset	Tiling	Mirror	Tile	Angle
U:	0,0	1,0	☐	☑	U: 0,0
V:	0,0	1,0	☐	☑	V: 0,0
					W: 90,0

● UV ○ VW ○ WU

Blur: 1,0 Blur offset: 0,0 Rotate

Noise

Gradient Ramp Parameters

R=3,G=9,B=11, Pos=0

Gradient Type: Linear Interpolation: Linear

Source Map: (None) ☑

Noise:
Amount: 0,05 ● Regular ○ Fractal ○ Turbulence
Size: 1,0 Phase: 0,0 Levels: 4,0

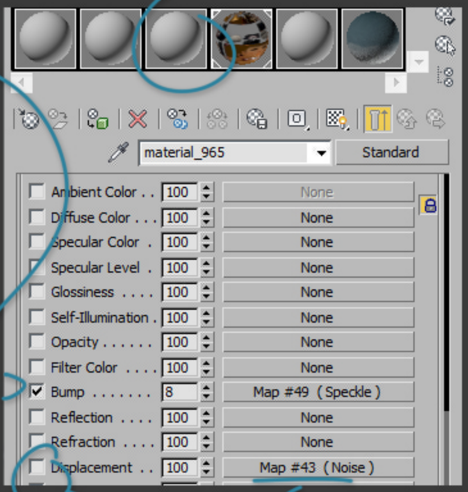
Noise Threshold:
Low: 0,0 High: 1,0 Smooth: 0,0

Set the W angel to 90

Colors are completely up to you, whatever matches your character. I recommend starting with a darker shade, place them more or less equally and make the 4th one light grey.

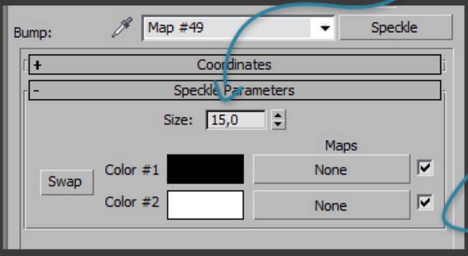
Add some noise. I used a very fine value, once again its up to you. Experiment with the settings.

Grab another material slot, this time, click bump map, and add a speckle material set size to 15



material_965 — Standard

		Amount	Map
☐	Ambient Color	100	None
☐	Diffuse Color	100	None
☐	Specular Color	100	None
☐	Specular Level	100	None
☐	Glossiness	100	None
☐	Self-Illumination	100	None
☐	Opacity	100	None
☐	Filter Color	100	None
☑	Bump	8	Map #49 (Speckle)
☐	Reflection	100	None
☐	Refraction	100	None
☐	Displacement	100	Map #43 (Noise)



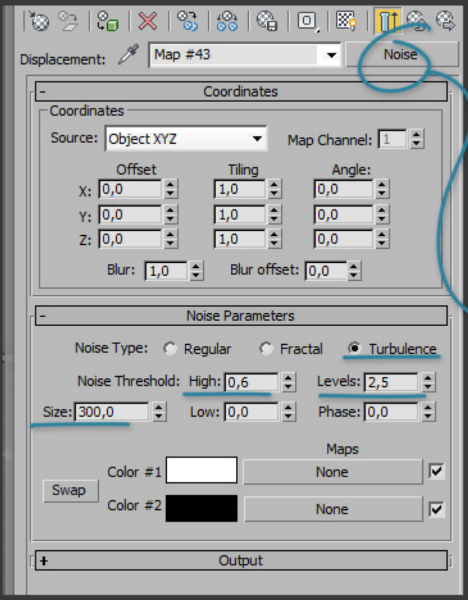
Bump: Map #49 — Speckle

Coordinates

Speckle Parameters

Size: 15,0

			Maps	
Swap	Color #1	■	None	☑
	Color #2	□	None	☑



Displacement: Map #43 — Noise

Coordinates

Source: Object XYZ Map Channel: 1

	Offset	Tiling	Angle:
X:	0,0	1,0	0,0
Y:	0,0	1,0	0,0
Z:	0,0	1,0	0,0

Blur: 1,0 Blur offset: 0,0

Noise Parameters

Noise Type: ○ Regular ○ Fractal ● Turbulence

Noise Threshold: High: 0,6 Levels: 2,5

Size: 300,0 Low: 0,0 Phase: 0,0

			Maps	
Swap	Color #1	□	None	☑
	Color #2	■	None	☑

Output

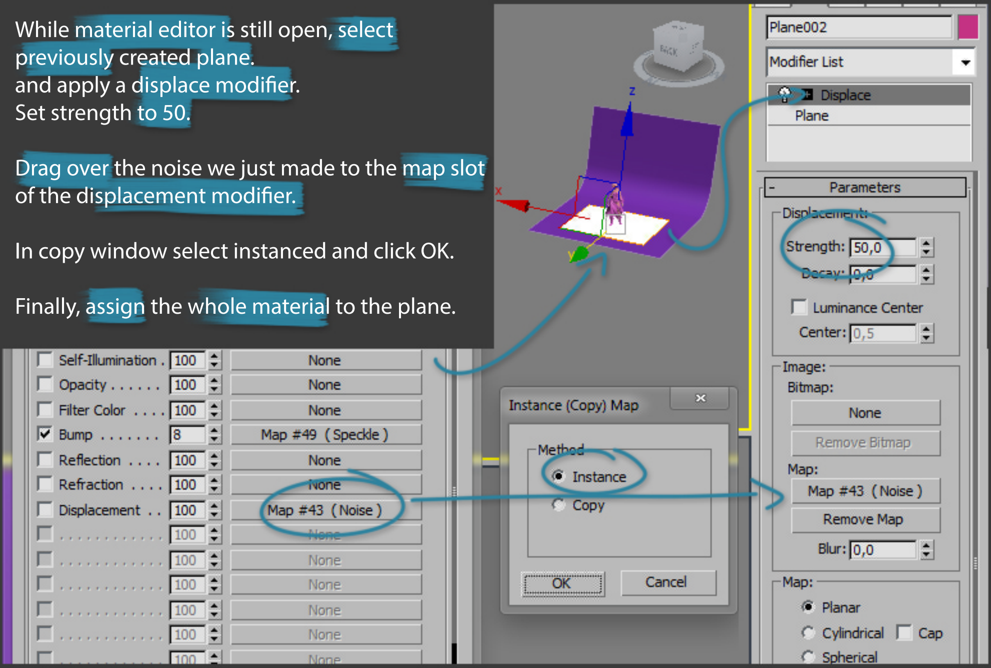
finally, click displacement, and make a noise material with the settings bellow. Make sure the Noise is not ticked on, We only use this slot as a place holder.

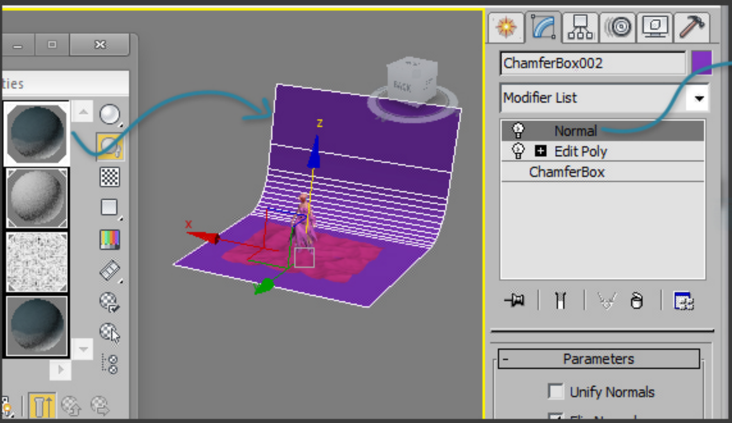
While material editor is still open, select previously created plane.
and apply a displace modifier.
Set strength to 50.

Drag over the noise we just made to the map slot of the displacement modifier.

In copy window select instanced and click OK.

Finally, assign the whole material to the plane.

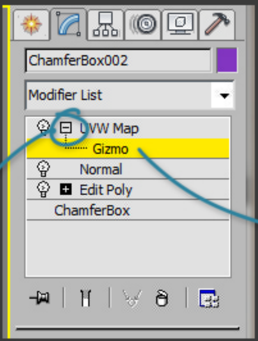


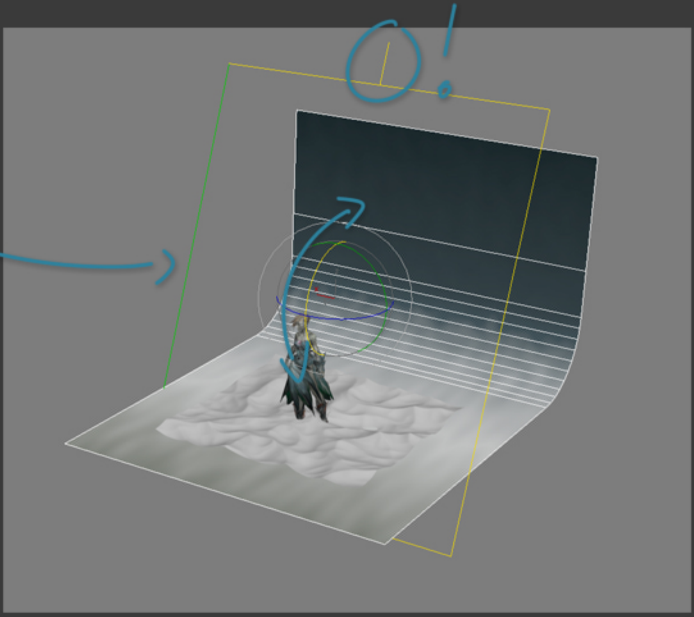


Now select the chamfer box and use a normal modifier on it. Make sure the Flip Normals are selected.

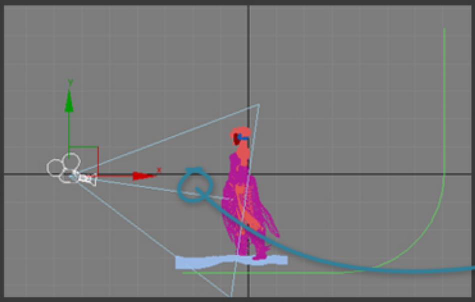
Than apply the gradient ramp texture.

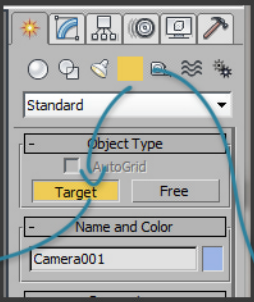
(don't mind my texture slots)





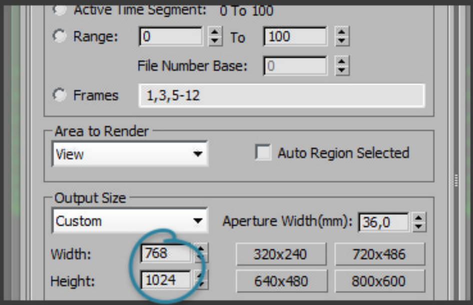
finally, add an UVW map modifier.
Click the small box to access Gizmo. And rotate the map plane until its match the picture.





Camera001

Time to add camera to the scene. You can find it under create menu 4th icon.

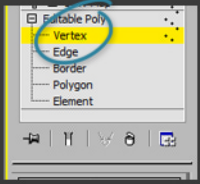


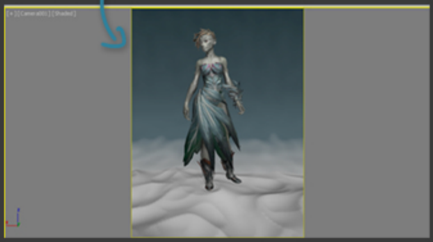
Active Time Segment: 0 To 100
Range: 0 To 100
File Number Base: 0
Frames 1,3,5-12
Area to Render: View
☐ Auto Region Selected
Output Size: Custom
Aperture Width(mm): 36,0
Width: 768
Height: 1024

Before we start to adjust the camera angel, Press F10 to open render window. And set the size of the image. That's also up to you, however a character in this environment looks better with a tall picture. the 3:4 ratio still works. So, set it 768x1024.

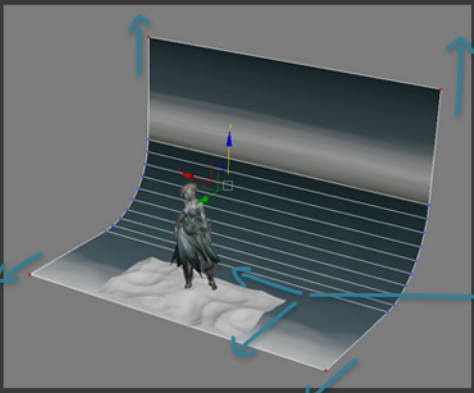
Now click Perspective view, and press C to activate camera, than press Shift + F to turn on safe frame so your viewport match the render size. (should look something like this)

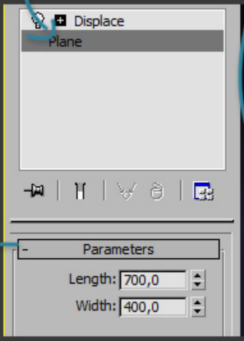
Its time for some fine tuning. You can change the chamfer box size by going back to edit poly level, and dragging the 2 top and bottom vertices



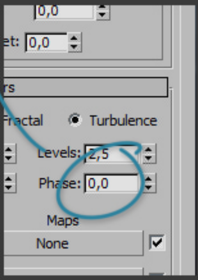


To adjust the size of the plane, simply select it under modifier tab, and set new values, You can also change the phase value under noise material to get different waves. Or generally experiment with the noise settings

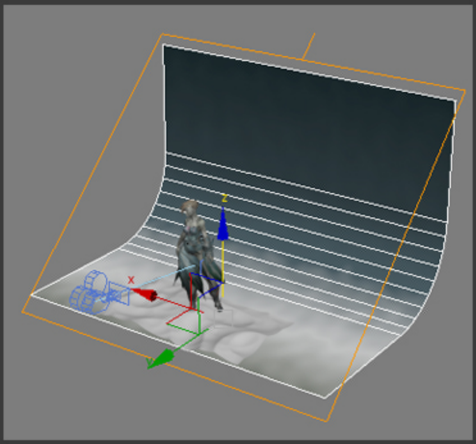




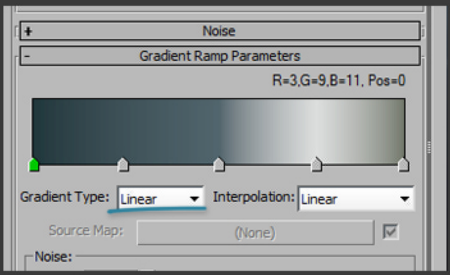
Length: 700,0
Width: 400,0



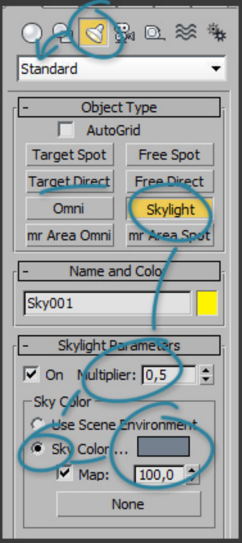
● Turbulence
Levels: 2,5
Phase: 0,0
None ☑



Once you got a camera angel right and set the size of the chamfer box. Re adjust the UVW map plane so its match your scene the best. Also you can experiment with gradient sliders, type and the noise to match scale.



R=3,G=9,B=11, Pos=0
Gradient Type: Linear
Interpolation: Linear
Source Map: (None) ☑
Noise:



Sky001

☑ On Multiplier: 0,5

○ Use Scene Environment

● Sky Color ...

☑ Map: 100,0

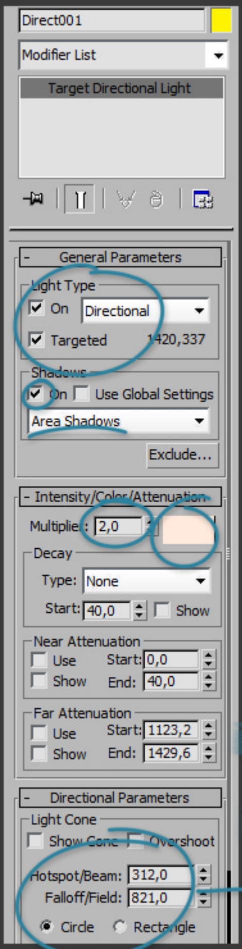
Now add some lights. Navigate to create panel, click lights, choose standard from roll-out menu, and place a skylight (location not important)

This light will brighten darker areas so shadows don't appear black, however it have no direction, and wont cast any shadow itself.

technically it can cast shadow, which is actually ambient occlusion. Our scene wont benefit much from it, and its significantly increase render time.

Set the color to dark blue (or dark grey. This color will affects shadow color) we want to keep it balanced with direct light. You can use a color from the gradient ramp palette.

Set multiplier to 0,5 however this setting up to you. If you want more contrast between dark and bright areas (strong sunlight effect) keep this setting low. If you want softer lights, with only minimal sunlight. Set it to 1.



Direct001

☑ On Directional

☑ Targeted 1420,337

☑ On ☐ Use Global Settings

Area Shadows

Multiplier: 2,0

Type: None

Start: 40,0 ☐ Show

☐ Use Start: 0,0

☐ Show End: 40,0

☐ Use Start: 1123,2

☐ Show End: 1429,6

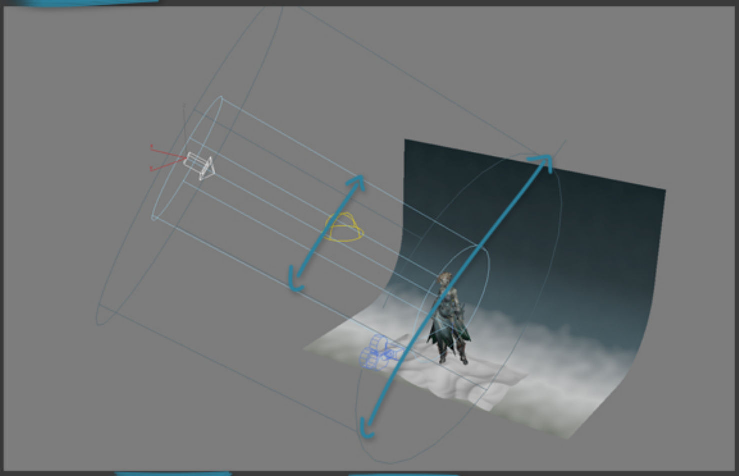
☐ Show Cone ☐ Overshoot

Hotspot/Beam: 312,0

Falloff/Field: 821,0

● Circle ○ Rectangle

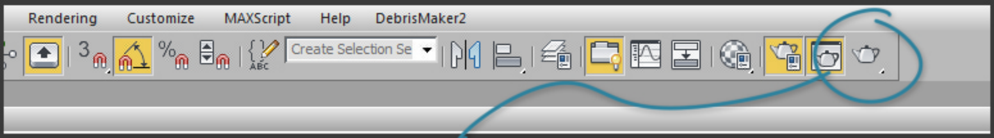
On the same panel you can find Direct Light. Since its the main light source, its position is important, using same direction as picture bellow will give a nice result, however you can experiment with it. Slight change could make huge difference in your scene.



Make sure shadow is on, and set to area Shadows. Multiplier is set 2, For a stronger sunlight effect. Once again, its up to your scene. Keep it balanced with skylight multiplier, either low skylight and higher direct-light, or vice-versa.

Color of this light is somewhat complementary color of skylight. Light yellow or orang is generally preferred. But too strong colors may have unwanted impact on the scene. This is also a setting that you want to keep balanced with skylight color.

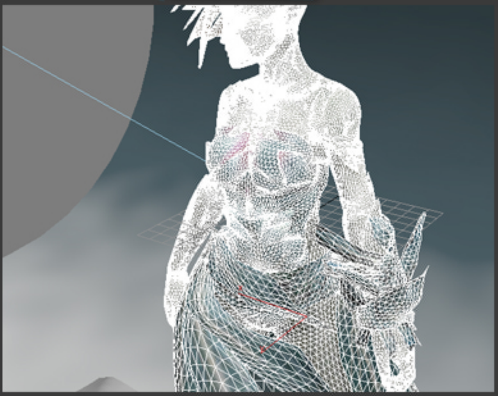
Under Direction Parameters set hotspot and falloff field so about 40% of your scene is covered by hotspot, and 80% is with falloff. This settings also have large impact on the final image, feel free to experiment.

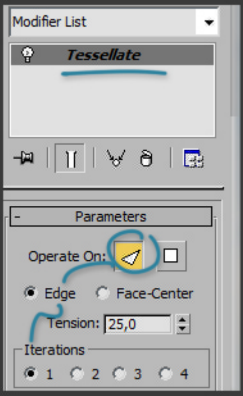


Done? done! Hit render, and hope for the best.

Lets walk through a few general tips to improve your render, Sometimes the first render, is far from final one, and some errors are a lot easier to fix in photoshop than in 3D.

If your model is a bit blocky, apply a Tessellate modifier. The first iterations usually enough. It can also cover up some geometry errors





Operate On:

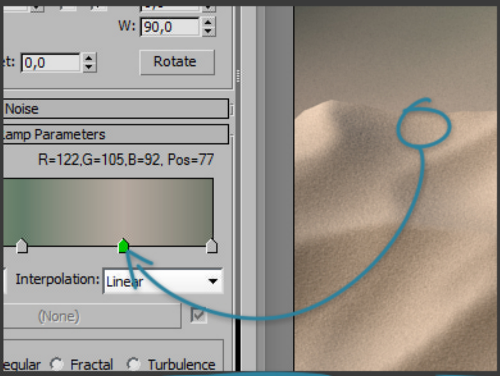
● Edge ○ Face-Center

Tension: 25,0

Iterations

● 1 ○ 2 ○ 3 ○ 4

Feel free to recolor your background, and give some color to the base plane as well. Also don't forget to apply the skin material we previously created for humans. (page 11)



W: 90,0

t: 0,0

R=122,G=105,B=92, Pos=77

Interpolation: Linear

To match the background object color with base plane. Click the 4th color slider in material editor, and pick a color from the rendered image.

Once you rendered image is done, you can always add more effects or fine tune it in photoshop!

This tutorial ends here, but you can find many more to improve your skills.
A Few links that can help:

http://www.3dtotal.com/index_tutorial.php
http://www.cgarena.com/freestuff/tutorials/
http://cgcookie.com/max
http://www.3dm3.com/articles/